UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R041XA007NM

Site Name: Clay Upland

Precipitation or Climate Zone: 12 to 16 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on nearly level to gently sloping uplands. Elevations range from 3,500 to 5,000 feet above sea level.

Land Form:

1. Plain
2.
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	3,500	5,000
Slope (percent)	0	1
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	Rare	Rare
Duration	Very brief	Very brief

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Precipitation ranges from 12 to 16 inches annually. More than half of this falls during July, August, and September in brief often-heavy thunderstorms. The rest of the moisture comes in the form of light rain or snow that falls slowly for a day or more. Snow rarely lasts more than a day. May and June are normally the driest months of the year. Humidity is generally very low.

Temperatures are mild. Freezing temperatures are common at night from December through April; however, temperatures during the day are frequently above 50 degrees F. Occasionally in December to February, brief 0degrees F temperatures may be experienced some nights. During June and rarely during July and August, some days may exceed 105 degrees F. Frost-free days range from 170 to 230 days.

The cool-season plants start growth in early spring and mature in early summer. The warm-season plants take advantage of the summer rains and are growing and nutritious from July through September. Warm season grasses may remain green throughout the year.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	167	187
Freeze-free period (days):	197	203
Mean annual precipitation (inches):	12	16

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.68	.89	24.0	61.0
February	.36	.59	26.9	65.0
March	.12	.45	25.5	71.5
April	.00	.23	34.7	78.7
May	.00	.20	25.5	87.0
June	.10	.55	40.0	95.1
July	1.26	2.33	46.4	95.7
August	2.28	3.15	48.5	92.6
September	.90	1.72	50.0	87.9
October	.43	1.12	36.1	80.0
November	.19	.69	31.3	67.6
December	.00	1.10	26.6	61.3

Climate Stations:

				Period	
Station ID 290417	Location Animas, NM	From: 1961	To: 1990		
Station ID 292757	Location Eicks Ranch, NM	From: 1961	To: 1990		
Station ID 297534	Location Rodeo, NM	From: 1961	To: 1990		

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:
N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

These are deep clay soils from volcanic origin. Although the permeability is very slow, the site takes initial water rapidly due to the large cracks that occur when it is dry. Varying amounts of cobble and gravel have been pushed to the surface.

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Silty clay loam
2.
3.

Surface Texture Modifier:

1. Gravel
2. Cobble
3.

Subsurface Texture Group: Clayey

Surface Fragments <=3" (% Cover): 15 to 35

Surface Fragments >3" (% Cover): 15 to 35

Subsurface Fragments <=3" (%Volume): 15 to 35

Subsurface Fragments >=3" (%Volume): N/A

	Minimum	**Maximum**
Drainage Class:	Well	Well
Permeability Class:	Impermeable	Very slow
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	0.00	4.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	7.4	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	3	6
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This site has a plant community made up principally of warm-season perennial grasses or grass like plants. The plant community found there is probably successionary and has the appearance of an old playa lake developing toward a grassland ecosystem. When range condition deteriorates tobosa, broom snakeweed, bluedick, and a few isolated mesquite bushed are the only species on the site. Plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors. The potential climax plant community has been determined by study of range relict areas, or areas protected from excessive grazing. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures and historical accounts have also been used.

Canopy Cover:	
Trees	Unknown
Shrubs and half shrubs	Unknown
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	Unknown
Bare ground	Unknown
Surface cobble and stone	Unknown
Litter (percent)	Unknown
Litter (average depth in cm.)	Unknown

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	170	340	425
Forb	30	60	75
Tree/Shrub/Vine	-	-	-
Lichen			
Moss			
Microbiotic Crusts			
Total	200	400	500

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	MURI	Mat Muhly	80 – 120	80 – 120
2	ELEL5	Bottlebrush Squirreltail	20 – 40	20 – 40
3	PAOB	Vine-mesquite	20 – 40	20 – 40
4	BOCU	Sideoats Grama	4 – 20	4 - 20
	BUDA	Buffalograss		
	CAREX	Sedges spp.		
	SPAI	Alkali Sacaton		
	BOGR2	Blue Grama		
	2GA	Annual Grasses		

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
5	2FA	Annual Forbs	40 – 80	40 – 80
	2FP	Perennial Forbs		
	GRSQ	Curlycup Gumweed		

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID **1907NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Grassland with minor forb component.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	3	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

Wildlife use is mostly transient between watercourses with seasonal use to take advantage of available vegetation. Utilization of the site is light to moderate throughout the year. Wildlife species include pronghorn antelope, desert cottontail, whitethroat woodrat, javelina, scaled quail and Gamble's quail.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series	Hydrologic Group
Anamite	D

Recreational Uses:

Lack of variety in the plant community keeps the aesthetic appeal low. The generally mild climate allows outdoor activities year round. Hunting and wildlife observation are the principal activities on this site.

Wood Products:

No Data

Other Products:

Grazing:
This site is capable of supporting large numbers of animals during the months following the summer rains. When the plants go dormant, they deteriorate rapidly in palatability and food value, and if used during this period, the animals usually require protein, vitamins and mineral supplements. Stocking rates should be evaluated and livestock numbers adjusted based on actual use experience and climatic fluctuations.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	7.0 – 10.0
75 – 51	10.0 – 13.0
50 – 26	13.0 – 16.0
25 – 0	16.0+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Mat Muhly	Muhlenbergia richardsonis	EP	U	U	D	D	D	D	D	D	U	U	U	U
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	D	D	D	D
Annual Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Perennial Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Curlycup Gumweed	Grindelia squarrosa	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Animal Kind: Wildlife

Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Mat Muhly	Muhlenbergia richardsonis	EP	U	U	D	D	D	U	U	U	U	U	U	U
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	U	U	U	U
Vine-mesquite	Panicum obtusum	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Annual Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Perennial Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Curlycup Gumweed	Grindelia squarrosa	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Hidalgo**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: **Approximately 2 ½ miles southwest of Fitzpatrick Ranch in ancient lake bed.**

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the SE Arizona Basin and Range 41 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Hidalgo

Characteristic Soils Are:	
Anamite	
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	07/21/80	Don Sylvester	07/21/80

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	07/12/02	George Chavez	2/12/03